

sad experience with vortex-ring cannons for driving away hail. Russia has enjoyed the gratuitous services of Demtschinsky and his predictions based upon the moon.

In general, it would seem that weather prediction and long-range forecasts are so greatly desired that everyone is willing to give a man a fair show. The wonder is that the indefinite utterances of these oracles can be accepted as forecasts, or that their flat failure when they do become definite should not have consigned them to oblivion. Recall, for instance, the sad work of Falb, who in 1895 predicted terrible earthquakes and storms, possibly indicating the approaching end of the world, thereby frightening the whole of Spanish America, so that no work could be done for weeks and the whole community was thrown into a hopeless state of panic. Recall the prediction made about 1880 of an awful storm that would scourge the Gulf and South Atlantic States. Many of the intelligent inhabitants and nine-tenths of the less intelligent were frightened by the prediction, and allowed it to entirely alter their ordinary lives and business.

Who was it that in 1901 started a newspaper paragraph, purporting to come from some responsible person, predicting a hurricane for the coast of New Jersey on a certain date? So great was the anxiety that it was necessary for the Secretary of Agriculture to issue a counteracting telegram showing that the original was certainly a fake. A community even of the most intelligent, cool-headed people is likely to be carried off its feet by enthusiasm for some hero or by a mania for some financial scheme, or to be stampeded by fright. Emotions are contagious, and it is necessary for a community to protect itself against injurious popular movements, just as it would protect itself against injurious contagious diseases. Freedom of individual action is the ideal on which we have built up our republic; but when that freedom of action threatens the existence of the republic it must be restrained, moderately, if you will, and wisely, but still sufficiently to protect the public from danger. We would not for a moment countenance the publication of numerous nautical almanacs differing considerably in the prediction of the exact positions of the sun, moon, and stars, because we know that only one of these can be right, and that the others would certainly lead to errors in navigation that would endanger the lives of thousands of persons. The community does not allow either druggists or physicians to operate without first giving satisfactory evidence that they are competent to handle the drugs that they deal in. Every State has its laws relative to the licensing of steam engineers, since a steam engine in incompetent hands would be a menace to the lives of many.

Wherever the life and property of the citizens are at stake, the Government of the people, by the people, and for the people must necessarily look after their interests, and the time must soon come when a general law shall forbid the publication of weather predictions and storm warnings, especially those of a sensational character, by any others than properly licensed persons.

LIGHTNING STROKES IN THE OPEN FIELD.

It is commonly supposed that lightning strikes only elevated objects. In fact, on page 478 of the MONTHLY WEATHER REVIEW for October, 1902, Prof. John Trowbridge of Cambridge, Mass., shows how difficult, if not impossible, it is for lightning to strike down upon a smooth plane surface of water. Of course, the waves of the ocean and the irregularities on what is called a plane surface of land may occasionally be struck by lightning, and two cases of this kind have lately come to our notice.

In July, 1899, Mr. Morton Henry, on a farm near New Bethlehem, Pa., was in an open field, without trees near by, having only the horses, the plow, and a boy at hand. He and the boy sheltered themselves under the shoulders of the horses during

a light shower from an insignificant looking cloud. The horses were killed instantly and the men rendered unconscious.

On July 10, 1903, Mr. Sylvanus Summers, and his son Clinton Summers, were loading hay on their farm seven miles northeast of Canton, Ohio. The sky was somewhat threatening and light thunder was heard in the distance. There was no local rain, the storm was apparently far away, the sun was shining through rifts in the clouds, the hay wagon was passing between two small piles of hay, when the lightning struck it, killing the horses and Mr. Clinton Summers and prostrating the others. The hay did not catch fire, and there were only slight burns on the horses, but Mr. Summers's clothing was ignited in several places. No thunder of any consequence was heard after that belonging to this particular stroke, and no rain fell at this locality, although it rained shortly afterwards about a mile farther north.

These are cases against which it is impracticable to provide, since no one cares to wear a wire cage, such as electricians recommend as a perfect protection for houses and powder magazines. We must accept them as corresponding to the legal term "an act of God," or an "inevitable necessity occurring by reason of the operations of nature unmingled with human agency or human neglect."

THE CLIMATE OF MANILA.

The following extract from an article by Mr. William E. Curtis, formerly Chief of the Bureau of Central American Republics, and now residing in Manila, is taken from the Washington Evening Star of June 4, 1904. It graphically expresses the convictions of the Editor, based on his own short experience in the Tropics, and is in harmony with the writings of the best authors on the subject. The meteorological elements of climatology, especially heat and moisture, constitute a source of discomfort, but only in rare cases one of danger or disease. The majority of individuals are so constituted that by a proper attention to diet they may successfully become acclimated. It does not seem proper to attribute to the climate of any place the diseases that are due to neglect, carelessness, living germs, and other nonmeteorological causes.

Mr. Curtis's article points out the numerous local sources of disease, foul water, bad sewerage, poor quarantine, ignorance and carelessness of newcomers; but all these are foreign to the climate proper, about which he makes the following remarks:

The climate of Manila is no worse than that of Florida or New Orleans, Galveston, or any other of the Gulf ports of the United States. Its bad reputation is chiefly due to stories by those who did not know how to take care of themselves, and, being exposed to hardships, fatigue, and bad weather, being careless in their habits and ignorant of the dangers of the tropical sun and impure water, suffered from sickness, which they attributed to the climate instead of their own neglect.

It may be asserted truthfully that no tropical islands in the world enjoy a better climate than the Philippines, and if they were situated within a week or ten days' voyage of New York they would soon become a popular winter resort for pleasure seekers and a sanatorium for invalids. From the middle of November until the middle of March the atmosphere is delightful, and to those who like a semitropical climate like that of Florida it is unexcelled.

In the middle of the day the sun is hot, and those who are unaccustomed to it must wear pith helmets, carry umbrellas, and take the shady side of the street. Within doors it is always comfortable. A breeze springs up about 11 o'clock in the morning and blows gently all day and into the night. After 4 o'clock in the afternoon the air begins to grow cool, and from that hour until 9 the next morning through the winter months the thermometer will stand between 75 and 80 degrees day after day, with a breeze usually so cool that ladies need to wear a light wrap. During the night you will wake up and pull a blanket over you.

During the summer months, from the middle of March to the 1st of October, the atmosphere is humid and very depressing. Sometimes the air will be so heavy with moisture that it is difficult to breathe, and the pores of the body will flow with perspiration at the slightest exertion. This weather, however, is no more severe and the suffering no greater than that experienced in the towns along the Mississippi and Ohio rivers, in Florida, Texas, and the other Gulf States. Indeed, the temperature in Manila during the summer month after month will average lower than